BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

In the matter of the adoption of New Rule I pertaining to natural and nonanthropogenic water quality standards	))))	NOTICE OF PUBLIC HEARING ON PROPOSED ADOPTION (WATER QUALITY)

TO: All Concerned Persons

1. On June 17, 2020, at 10:00 a.m., the Board of Environmental Review (board) will hold a public hearing in Room 111 of the Metcalf Building, 1520 E. Sixth Avenue, Helena, Montana, to consider the proposed adoption of the above-stated rule.

2. The board will make reasonable accommodations for persons with disabilities who wish to participate in this rulemaking process or need an alternative accessible format of this notice. If you require an accommodation, contact Sandy Scherer no later than 5:00 p.m., June 10, 2020, to advise us of the nature of the accommodation that you need. Please contact Sandy Scherer at the Department of Environmental Quality, P.O. Box 200901, Helena, Montana 59620-0901; phone (406) 444-2630; fax (406) 444-4386; or e-mail sscherer@mt.gov.

3. The rule proposed to be adopted provides as follows:

NEW RULE I NATURAL AND NONANTHROPOGENIC WATER QUALITY STANDARDS (1) Named waterbodies, waterbody segments, or waterbodies within geographic regions listed below have natural or nonanthropogenic concentrations for one or more parameters that exceed the applicable standards. For these waterbodies, the standards specified in (2) supersede the otherwise applicable water quality standards found elsewhere in state law.

(2) No person may violate the numeric water quality standards identified below:

(a) Mainstem Yellowstone River Nonanthropogenic Standards. Water quality standards for human health for total recoverable arsenic (CASRN number 7440-38-2). Average arsenic concentrations during a calendar year may not exceed the standards, and downstream water quality and applicable beneficial uses shall continue to be maintained. The standards, specified by segment, are as follows:

(i) From the Montana/Wyoming border (44.9925, -110.5172) to the mouth of Mill Creek (45.4165, -110.6548): 28 µg/L;

(ii) From the mouth of Mill Creek (45.4165, -110.6548) to the mouth of the Boulder River (45.8530, -109.9247): 22 µg/L;

(iii) From the mouth of the Boulder River (45.8530, -109.9247) to the mouth of the Stillwater River (45.6399, -109.2829): 16 µg/L; and

(iv) From the mouth of the Stillwater River (45.6399, -109.2829) to the mouth of the Clarks Fork of the Yellowstone River (45.6510, -108.7145): 13 µg/L.

(3) Named waterbodies, waterbody segments, or waterbodies within

geographic regions specified in (2) have no assimilative capacity for the applicable natural or nonanthropogenic standards. Therefore, the department may not grant a mixing zone under ARM Title 17, chapter 30, subchapter 5 for these waterbodies and the specified standards.

AUTH: 75-5-201, 75-5-301, MCA
IMP: 75-5-222, 75-5-306, MCA

REASON: State law grants the board authority to adopt nonanthropogenic water quality standards when the otherwise applicable standards are more stringent than the nonanthropogenic condition of the waterbody. Correspondingly, the department may not apply a water quality standard to a water body that is more stringent that the nonanthropogenic condition of the waterbody (75-5-222, MCA). In such cases, the nonanthropogenic condition is the standard. Further, it is not necessary to treat wastes to a condition purer than the natural condition (75-5-306, MCA).

NEW RULE I establishes a framework for adopting water quality standards which are based on natural or nonanthropogenic conditions, and establishes nonanthropogenic-based arsenic standards for certain segments of the Yellowstone River. Natural or nonanthropogenic water quality standards are established because natural or nonanthropogenic effects on the landscape have resulted in arsenic concentrations in state surface waters that naturally exceed the otherwise applicable state water quality standards. NEW RULE I has been drafted so that standards for other named waterbodies, waterbody segments, or groups of waterbodies within specific geographic regions can all be incorporated into the rule at a later time.

The first standards being set under NEW RULE I are for arsenic concentrations in segments of the Yellowstone River. At present, there is a single human-health based arsenic standard of 10 µg/L for state waters across Montana (Department Circular DEQ-7). Arsenic concentrations are elevated above 10 µg/L in the upper and middle Yellowstone River, and this is due to natural causes—from geothermal sources in Yellowstone National Park. Geothermal sources of arsenic from the park can reasonably be considered nonanthropogenic.

In 2015, the department began a project to determine how much of the Yellowstone River's arsenic is nonanthropogenic, and to update arsenic standards for the river, if appropriate. The project included field data collection, quantification of all human-caused arsenic sources, in-house computer modeling, derivation of the new standards, and identification of methods to implement the new standards; the work is described in three reports on the department's website (DEQ. 2019a; 2019b; DEQ. 2020). From this work, the department has identified four Yellowstone River segments for which site-specific nonanthropogenic arsenic standards can be established at concentrations above the current 10 µg/L human-health based standard. The new standards are being expressed as the annual median nonanthropogenic concentration, as specified in NEW RULE I(2).

The standards are necessary because they reflect existing, nonanthropogenic water quality in one of the state's main waterways. From the human health perspective, they are the most protective expression of the nonanthropogenic

arsenic standards from among several options considered by the department (DEQ. 2020). Because the nonanthropogenic standards are more accurate, they preclude application of unnecessarily stringent water quality standards for dischargers along the Yellowstone River who have an MPDES permit limit for arsenic.

Waterbodies identified in this rule have no assimilative capacity because the standards are being established at the existing, nonanthropogenic concentration. As a result, the waterbodies cannot assimilate discharges having concentrations higher than the standard because that would result in instream concentrations elevated above the nonanthropogenic condition. Therefore, mixing zones are not allowed. Establishing the standards at the nonanthropogenic concentration and disallowing mixing zones will prevent concentrations in the waterbodies from trending up due to human causes, and will maintain the nonanthropogenic condition characterized at the time the standards were established.

The technical reports referenced above are as follows:

DEQ (Montana Department of Environmental Quality). 2019a. *Demonstration of Nonanthropogenic Arsenic Levels: Yellowstone River, Montana*. Helena, MT: Montana Dept. of Environmental Quality.

DEQ (Montana Department of Environmental Quality). 2019b. *Derivation of Nonanthropogenic Arsenic Standards for Segments of the Upper and Middle Yellowstone River*. Helena, MT: Montana Dept. of Environmental Quality.

DEQ (Montana Department of Environmental Quality). 2020. *Addendum to Derivation of Nonanthropogenic Arsenic Standards for Segments of the Upper and Middle Yellowstone River*. Helena, MT: Montana Dept. of Environmental Quality.

4. Concerned persons may submit their data, views, or arguments, either orally or in writing, at the hearing. Written data, views, or arguments may also be submitted to Sandy Scherer, Paralegal, Department of Environmental Quality, 1520 E. Sixth Avenue, P.O. Box 200901, Helena, Montana 59620-0901; faxed to (406) 444-4386; or e-mailed to sscherer@mt.gov, no later than 5:00 p.m., June 19, 2020. To be guaranteed consideration, mailed comments must be postmarked on or before that date.

The technical support documents referenced above may be viewed at this department website: https://deq.mt.gov/water/Surfacewater/standards. Copies of any of these documents may also be obtained by contacting Dr. Michael Suplee at (406) 444-0831 or msuplee@mt.gov.

5. The board maintains a list of interested persons who wish to receive notices of rulemaking actions proposed by this agency. Persons who wish to have their name added to the list shall make a written request that includes the name, e-mail, and mailing address of the person to receive notices and specifies that the person wishes to receive notices regarding: air quality; hazardous waste/waste oil; asbestos control; water/wastewater treatment plant operator certification; solid waste; junk vehicles; infectious waste; public water supply; public sewage systems

regulation; hard rock (metal) mine reclamation; major facility siting; opencut mine reclamation; strip mine reclamation; subdivisions; renewable energy grants/loans; solar and wind energy bonding, wastewater treatment or safe drinking water revolving grants and loans; water quality; CECRA; underground/above ground storage tanks; MEPA; or general procedural rules other than MEPA. Notices will be sent by e-mail unless a mailing preference is noted in the request. Such written request may be mailed or delivered to Sandy Scherer, Paralegal, Department of Environmental Quality, 1520 E. Sixth Ave., P.O. Box 200901, Helena, Montana 59620-0901, faxed to the office at (406) 444-4386, e-mailed to Sandy Scherer at sscherer@mt.gov, or may be made by completing a request form at any rules hearing held by the board.

6. Sarah Clerget, attorney for the board, or another attorney for the Agency Legal Services Bureau, has been designated to preside over and conduct the hearing.

7. The bill sponsor contact requirements of 2-4-302, MCA, do not apply.

8. With regard to the requirements of 2-4-111, MCA, the board has determined that the adoption of the above-referenced rule will not significantly and directly impact small businesses.

Reviewed by: BOARD OF ENVIRONMENTAL REVIEW

/s/ Edward Hayes BY: */s/ Christine Deveny*
EDWARD HAYES CHRISTINE DEVENY
Rule Reviewer Chair

Certified to the Secretary of State, April 21, 2020.